

LISTING OF CLAIMS

(1). (canceled)

(2). (canceled)

(3). (currently amended) A liquid crystal display comprising:

first and second substrates each having a display and a non-display region and being disposed to face each other;

a plurality of columns each comprising a spacer ~~spacers~~
disposed in the non-display region of at least one of the first and the second substrates and being formed of photosensitive resin which regulates a cell gap between the first and the second substrates; and

liquid crystal sandwiched between the first and the second substrates,

wherein each of said spacers has a ~~have~~ dynamic hardness value (DH) from 26 to 30, which is obtained by the following formula:

$$DH = K \times P_{\max} / h_{\max}^2,$$

wherein DH is dynamic hardness, K is a constant value assigned to the indentator used to test the liquid crystal display, P_{\max} is maximum load, and h_{\max} is the total maximum

variation obtained by adding the measured elastic deformation and plastic deformation under load,

and wherein each of said spacers has ~~have~~ a hardness value of plastic deformation (HV) from 38 to 46, which is obtained by the following formula:

$$HV = K \times P_{\max} / h_r^2,$$

wherein HV is hardness of plastic deformation, K is a constant value assigned to the indentator used to test the liquid crystal display, P_{\max} is maximum load, and h_r is measured variation when the tangent in the maximum variation point of a curb has no load in the case of unloading.

(4) - (8) (canceled)

(9) (currently amended) The liquid crystal display according to claim 3 wherein said plurality of columns ~~spacers~~ have column occupancy ratio from 0.05 to 0.86%, which is expressed as follows:

Column occupancy ratio = (Lower bottom area of column x column

Density/pixel) x 100

Column density: Total number of columns/total number of pixels.

(10) - (14) (canceled)

(15) (currently amended) The liquid crystals according to claim 3 wherein for a rectangular ~~spacer~~ ~~spacers~~, the length of one side of the upper spacer surface is 50 to 90% smaller than the length of one side of the lower spacer surface and wherein for a circular ~~spacer~~ ~~spacers~~, the diameter of the upper spacer surface is 50 to 90% smaller than the diameter of the lower spacer surface.

(16) - (28) (canceled)

(29) (currently amended) A ~~The~~ method for providing a liquid crystal display comprising the steps of:

disposing a first and second substrate facing each other, said first and second substrates having a display and a non-display region;

selecting a photosensitive resin to regulate a cell gap between the first and the second substrate; ~~according to claim 28~~ wherein said selecting of a photosensitive resin comprises choosing a photosensitive resin based on at least one of the group consisting of:

(a) a dynamic hardness value from 26 to 30, which is obtained by the following formula:

$$DH = K \times P_{\max} / h_{\max}^2,$$

wherein DH is dynamic hardness, K is a constant value assigned to the indentator used to test the liquid crystal

display, P_{max} is maximum load, and h_{max} is the total maximum variation obtained by adding the measured elastic deformation and plastic deformation under load;

(b) a hardness value of plastic deformation (HV) from 38 to 46, which is obtained by the following formula:

$$HV = K \times P_{max} / h_r^2,$$

wherein HV is hardness of plastic deformation, K is a constant value assigned to the indentator used to test the liquid crystal display, P_{max} is maximum load, and h_r is measured variation when the tangent in the maximum variation point of a curb has no load in the case of unloading;

(c) an elastic coefficient from 100 to 500 kg/mm^2 ; a linear expansion coefficient which is nearly equal to the coefficient of volume expansion per unit area of the liquid crystal;

(d) wherein for rectangular spacers, the length of one side of the upper spacer surface is 50 to 90% smaller than the length of one side of the lower spacer surface and wherein for circular spacers, the diameter of the upper spacer surface is 50 to 90% smaller than the diameter of the lower spacer surface; and

(e) a column occupancy ratio from 0.05 to 0.86%, which is expressed as follows:

$$\text{Column occupancy ratio} = (\text{Lower bottom area of column} \times \text{column density} / \text{pixel area}) \times 100$$

Column density: Total number of columns/total number of
pixels;

placing spacers comprising said photosensitive resin between
the first and the second substrates, said spacers being placed in
the non-display region of at least one of the first and the
second substrates; and

providing liquid crystal between the first and the second
substrates.